

# NONENE

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## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Nonene (nonlinear) Propylene trimer Tripropylene	Liquid	Colorless	Gasoline-like odor
Floats on water. Flammable, irritating vapor is produced.			
Keep people away. Avoid inhalation. Shut off ignition sources and call fire department. Stay upwind and use water spray to "knock down" vapor. Avoid contact with liquid and vapor. Notify local health and pollution control agencies. Protect water intakes.			
<b>Fire</b>	FLAMMABLE. Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. Extinguish with dry chemical, foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.		
<b>Exposure</b>	CALL FOR MEDICAL AID.  VAPOR Irritating to eyes, nose and throat. If inhaled, will cause dizziness or loss of consciousness. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.  LIQUID Irritating to skin and eyes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. DO NOT INDUCE VOMITING.		
<b>Water Pollution</b>	Effect of low concentrations on aquatic life is unknown. Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.		

### 1. CORRECTIVE RESPONSE ACTIONS

- Stop discharge
- Contain
- Collection Systems: Skim
- Chemical and Physical Treatment: Burn
- Clean shore line
- Salvage waterfowl

### 2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: 30; Olefin
- 2.2 Formula: C<sub>9</sub>H<sub>18</sub>
- 2.3 IMO/UN Designation: Not listed
- 2.4 DOT ID No.: 2057
- 2.5 CAS Registry No.: Currently not available
- 2.6 NAERG Guide No.: 128
- 2.7 Standard Industrial Trade Classification: 51119

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Respiratory organic vapor canister or air-supplied mask; face splash shield.
- 3.2 **Symptoms Following Exposure:** High vapor concentrations irritate eyes and respiratory tract and act as an anesthetic.
- 3.3 **Treatment of Exposure:** INHALATION: remove patient to fresh air; if breathing stops, apply artificial respiration and administer oxygen; call a physician. INGESTION: do NOT induce vomiting because of aspiration hazard.
- 3.4 **TLV-TWA:** Not listed.
- 3.5 **TLV-STEL:** Not listed.
- 3.6 **TLV-Ceiling:** Not listed.
- 3.7 **Toxicity by Ingestion:** Currently not available
- 3.8 **Toxicity by Inhalation:** Currently not available.
- 3.9 **Chronic Toxicity:** Currently not available
- 3.10 **Vapor (Gas) Irritant Characteristics:** Vapors cause a slight smarting of the eyes or respiratory system if present at high concentrations. The effect is temporary.
- 3.11 **Liquid or Solid Characteristics:** Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
- 3.12 **Odor Threshold:** Currently not available
- 3.13 **IDLH Value:** Not listed.
- 3.14 **OSHA PEL-TWA:** Not listed.
- 3.15 **OSHA PEL-STEL:** Not listed.
- 3.16 **OSHA PEL-Ceiling:** Not listed.
- 3.17 **EPA AEG1:** Not listed

### 4. FIRE HAZARDS

- 4.1 **Flash Point:** 78°F O.C.
- 4.2 **Flammable Limits in Air:** 0.7%-3.9% (est.)
- 4.3 **Fire Extinguishing Agents:** Foam, carbon dioxide, or dry chemical
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Water may be ineffective
- 4.5 **Special Hazards of Combustion Products:** Not pertinent
- 4.6 **Behavior in Fire:** Not pertinent
- 4.7 **Auto Ignition Temperature:** Currently not available
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** 6.0 mm/min.
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** 64.3 (calc.)
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** 18.0 (calc.)
- 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

### 5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction
- 5.2 **Reactivity with Common Materials:** No reaction
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
- 5.5 **Polymerization:** Not pertinent
- 5.6 **Inhibitor of Polymerization:** Not pertinent

### 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** Currently not available
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):** Currently not available
- 6.4 **Food Chain Concentration Potential:** None
- 6.5 **GESAMP Hazard Profile:** Not listed

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Technical
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** No requirement
- 7.4 **Venting:** Open (flame arrester) or pressure-vacuum
- 7.5 **IMO Pollution Category:** B
- 7.6 **Ship Type:** 3
- 7.7 **Barge Hull Type:** Currently not available

### 8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Flammable liquid
- 8.2 **49 CFR Class:** 3
- 8.3 **49 CFR Package Group:** III
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:**

Category	Classification
Health Hazard (Blue).....	0
Flammability (Red).....	3
Instability (Yellow).....	0
- 8.6 **EPA Reportable Quantity:** Not listed.
- 8.7 **EPA Pollution Category:** Not listed.
- 8.8 **RCRA Waste Number:** Not listed
- 8.9 **EPA FWPCA List:** Not listed

### 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid
- 9.2 **Molecular Weight:** 126.2
- 9.3 **Boiling Point at 1 atm:** 275–284°F = 135–140°C = 408–413°K
- 9.4 **Freezing Point:** Not pertinent
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** 0.739 at 20°C (liquid)
- 9.8 **Liquid Surface Tension:** 22 dynes/cm = 0.022 N/m at 24°C
- 9.9 **Liquid Water Interfacial Tension:** 35.5 dynes/cm = 0.0355 N/m at 21.3°C
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** (est.) 1.044
- 9.12 **Latent Heat of Vaporization:** (est.) 124 Btu/lb = 68.9 cal/g = 2.88 X 10<sup>5</sup> J/kg
- 9.13 **Heat of Combustion:** –19,100 Btu/lb = –10,600 cal/g = –445 X 10<sup>5</sup> J/kg
- 9.14 **Heat of Decomposition:** Not pertinent
- 9.15 **Heat of Solution:** Not pertinent
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** Currently not available
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** 0.21 psia

### NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
32	47.120	85	0.529	42	1.040	46	0.722
34	47.060	90	0.533	44	1.040	48	0.712
36	47.010	95	0.536	46	1.040	50	0.701
38	46.950	100	0.540	48	1.040	52	0.691
40	46.900	105	0.543	50	1.040	54	0.681
42	46.840	110	0.547	52	1.040	56	0.671
44	46.790	115	0.550	54	1.040	58	0.662
46	46.730	120	0.554	56	1.040	60	0.653
48	46.680	125	0.557	58	1.040	62	0.643
50	46.620	130	0.561	60	1.040	64	0.635
52	46.570	135	0.564	62	1.040	66	0.626
54	46.510	140	0.568	64	1.040	68	0.617
56	46.460	145	0.571	66	1.040	70	0.609
58	46.400	150	0.575	68	1.040	72	0.601
60	46.350			70	1.040	74	0.593
62	46.300			72	1.040	76	0.585
64	46.240			74	1.040	78	0.577
66	46.190			76	1.040	80	0.570
68	46.130			78	1.040	82	0.562
70	46.080			80	1.040	84	0.555
72	46.020			82	1.040	86	0.548
74	45.970			84	1.040	88	0.541
76	45.910					90	0.534
78	45.860					92	0.528
80	45.800					94	0.521
82	45.750					96	0.515

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	I	80	0.114	80	0.00248	0	0.335
	N	90	0.159	90	0.00340	25	0.350
	S	100	0.218	100	0.00459	50	0.364
	O	110	0.296	110	0.00610	75	0.379
	L	120	0.395	120	0.00802	100	0.393
	U	130	0.522	130	0.01040	125	0.407
	B	140	0.681	140	0.01335	150	0.421
	L	150	0.879	150	0.01695	175	0.435
	E	160	1.123	160	0.02130	200	0.448
		170	1.421	170	0.02652	225	0.462
		180	1.781	180	0.03274	250	0.475
		190	2.214	190	0.04007	275	0.488
		200	2.730	200	0.04866	300	0.501
		210	3.341	210	0.05866	325	0.514
		220	4.059	220	0.07022	350	0.526
		230	4.898	230	0.08349	375	0.538
		240	5.872	240	0.09866	400	0.551
		250	6.996	250	0.11590	425	0.563
		260	8.286	260	0.13540	450	0.574
		270	9.760	270	0.15730	475	0.586
		280	11.440	280	0.18180	500	0.597
		290	13.330	290	0.20910	525	0.609
		300	15.470	300	0.23930	550	0.620
		310	17.860	310	0.27280	575	0.631
		320	20.540	320	0.30970	600	0.642
		330	23.510	330	0.35010		